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GREATER EFFICIENCY IN SOVIET MACHINE-BUILDING INDUSTRY SOUGHT

LACK OF SCIENTIFIC AID IMPEDES PROGRESS IN HEAVY MACHINE-TOOL BUILDING -- Moscow, Pravda, 2 Oct 53

Within the system of the Ministry of Machine Building there are a number of scientific research institutes for studying machine-tool building problems. These institutes however, are doing practically no work in the field of heavy machine tools and presses. For example, ENIMS (Experimental Scientific Research Institute of Metal Cutting Machine Tools) is cut off from heavy machine-tool building plants and does not assist them in the matter of technical progress.

In perfecting heavy gear-hobbing machines, workers of the Kolomna Plant encountered certain difficulties and required the scientific aid of ENIMS. This aid, however, was not forthcoming. Plant workers and engineers of a Special Design Bureau had to solve complex technical problems themselves under production conditions and at a great loss of time and money.

Continuous research is now going on at the Kolomna Plant on the design of a hydraulic drive for heavy hydraulic slotting and planing machines. The perfection of these machine tools has been retarded. Yet, ENIMS ignores the plant's need for assistance. -- P. Yudenkov, Stalin Prize winner, chief of a Special Design Bureau.

NONUTILIZATION OF PRODUCTION RESERVES CRITICIZED -- Moscow, Voprosy Ekonomiki, Aug 53

The output of products at medium and small enterprises could be increased a great deal by better utilization of available production reserves. These reserves lie in equipment which is uninstalled, installed equipment poorly utilized, floor space, that is incompletely utilized, and in lightly loaded operating equipment.

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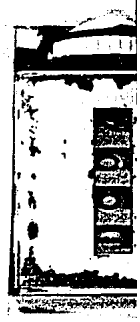

At certain Novosibirsk plants, up to 15-20 percent of the total equipment has not been installed.

The Novosibirsk Tool Plant has a large machine shop equipped with the most diversified modern metal-cutting machine tools; however, this equipment is far from being adequately utilized. For example, nonoperating equipment comprises about 30 percent [of the total]. Operating equipment is utilized on an average of not more than 2,000-2,500 hours a year. Consequently, the output of products per 1,000 rubles of the cost of equipment [at this specialized plant] is 1.5-2.5 times lower than at machine-building enterprises with individual production.

One reason for the incomplete utilization of metal-cutting equipment at this plant is the lack of a full complement of equipment. For example, because of a shortage of large forging hammers, the shop cannot manufacture a number of different spare parts. If the shops had enough large forging hammers, it could utilize more fully the capacities of its park of large lathes. Meanwhile, large forging hammers at a nearly tool plant are not being utilized to full capacity.

Incomplete utilization of equipment is a definite detriment to the state and frequently leads to a more rapid increase in the enterprise's capital assets than in its output. As a result, the output per unit of equipment decreases. In the first postwar Five-Year Plan, the park of equipment at the Novosibirsk Tool Plant increased more than 2.5 times, but the production program was increased by only 50 percent. In this period, the output of products per unit of equipment fell 40 percent; and per ruble of cost, by more than 50 percent.

REPORT ON STATUS OF CERTAIN MACHINE TOOLS IN POSTWAR YEARS -- Moscow, Stanki i Instrument, Sep 53

S.S. Chernikov recently gave a report to the Scientific and Technical Council of ENIMS (Experimental Scientific Research Institute of Metal-Cutting Machine tools) on the qualitative and quantitative changes in the park of milling, planing, and broaching machines in the USSR during the postwar years and on the theoretic and experimental research and design work which was the basis for the growth and improvement of the type classification of machine tools. He also reported on the tasks to be accomplished in this field in the near future.

According to Chernikov, milling, planing and broaching machines are widely used in Soviet industry, and, close in this respect to lathes, comprise about 20 percent of the total machine-tool park. Almost all of the machine tools are of original design, developed by Soviet specialists.

Compared with prewar machine tools, the speed of the new models has increased 2-3.5 times; feed, 2-2.5 times; and power, 2-2.5 times; while the average increase in weight has been not more than 1.5 times.

To achieve an increase in labor productivity in operating machine tools, efforts must be directed toward shortening machining and handling time.

Automatizing the work cycle and mechanizing machine-tool operation are the basic problems in shortening handling time and improving working conditions. The latter objectives can be accomplished by equipping machine tools with various attachments and by using hydraulic, electric, and pneumatic devices. Special attention must be given to converting wherever possible to the wide application of tracer methods. Further work is necessary in solving problems concerning accuracy, selection of effective drive systems, unification and normalization, and improving working conditions.

CONFERENCE ON STANDARIZATION IN MACHINE BUILDING -- Moscow, Stanki i Instrument, Aug 53

The Leningrad Branch of the All-Union Scientific Engineering and Technical Society of Machine Builders (LONITOMASh) has called a branch production and technical conference on standarization, normalization, and unification in machine building to promote greater development in standardization. The conference will be held in Leningrad in September 1953.

Reports will be read by and consultations held with specialists on the various problems in standardization, normalization, unification, and typification in machine building.

A special exhibit showing the work done at plants and other organizations will be arranged for participants in the conference.

GIVE EXAMPLE OF MANUFACTURING COST IN MACHINE-TOOL BUILDING -- Moscow, Komsomol'skaya Pravda, 17 Oct 53

In 1952 alone, more than 46 billion rubles were saved in the USSR as a result of lowering the cost of manufacturing industrial products.

The following table gives a breakdown of the cost of manufacturing one of the types of machine tools produced by the Moscow Krasnyy Proletariy Plant imeni Yef'emov:

	Rubles	Percent
Materials and fabricated parts	6,408	65.5
Wages of production workers	1,013	10.4
Wear of tools and attachments	160	1.6
Shop and general plant expenditures	2,124	21.8
Losses due to rejects	47	0.5
Nonproductive expenditures	1	--
Expenditures in sale of products	17	0.2
Total	9,770	100.0

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